

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No. 97,186-D)

In application of:

Moskal et al.

Serial No. 09/597,604

Filed: June 20, 2000

For: Methods for Prevention and Treatment
of Diseases Using a Glycosyltransferase

Group Art Unit:

INFORMATION DISCLOSURE STATEMENT

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

Dear Sir:

Pursuant to 37 C.F.R. Section 1.97 - 1.98, the Applicant wishes to make the following references of record in the above-identified application. This Information Disclosure Statement is in compliance with the continuing duty of candor as set forth in 37 C.F.R. Section 1.56. Copies of the references cited below are not enclosed since they were previously submitted in the parent application, serial number 08/969,437. These references are also listed on the enclosed PTO Form 1449.

In the judgment of the undersigned, portions of the listed references may be material to the Examiner's consideration of the presently pending claims. This statement is not a representation that the listed references have effective dates early enough to be "prior art" within the meaning of 35 U.S.C. Section 102 or Section 103.

CERTIFICATE OF MAILING (37 C.F.R. 1.8a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the: Assistant Commissioner for Patents, Washington D.C. 20231, on July 18, 2000.

Date: 14 July, 2000


Patrick J. Halloran

Article References:


- 1.) Lotan et al., (1984) *Cancer Res.* 44:5805-5812, Correlation of Retinoic Acid-enhanced Sialyltransferase Activity and Glycosylation of Specific Cell Surface Sialoglycoproteins with Growth Inhibition in a Murine Melanoma Cell System."
- 2.) Bresalier, et al.(1990), *Cancer Res.* 50:1299 "Cell Surface Sialoprotein Alterations in Metastatic Murine Colon Cancer Cell Lines Selected in an Animal Model for Colon Cancer Metastasis¹."
- 3.) Shah, et al., (1992), *J. Biol. Chem.* 267:10652-10658, "n-butyrate Reduces the Expression of α -Galactosidase α 2,6 -Sialyltransferase in Hep G2 cells."
- 4.) Sata, et al., (1991), *Am. J. Pathol.* 139:1435-1448, "Expression of α 2,6-Linked Sialic Acid Residues in Neoplastic but not in Normal Human Colonic Mucosa."
- 5.) Marer, et al., (1992), *Glycobiology* 2:49-56, "The c-Ha-ras oncogene induces increased expression of α -galactosidase α 2,6-sialyltransferase in rat fibroblast (FR3T3) cells."
- 6.) Kaneko, et al.,(1996) *Acta Neuropathol* 91:284-292, "The Expression of Gal α 1,4GlcNAc α 2,6 Sialyltransferase and α 2,6-linked Sialoglycoconjugates in Human Brain Tumors."
- 7.) Collard et al., (1986) *Cancer Research* 46:3521-3527 "Cell Surface Sialic Acid and the Invasive and Metastatic Potential of T-Cell Hybridomas."
- 8.) Livingstone et al. (1988) *J. Biol. Chem* 263:9443-9448, "Extended Polysialic Acid Chains (n < 55) in Glycoproteins from Human Neuroblastoma Cells*"
- 9.) Kojima, et al., (1994) *J. Bio. Chem.* 269:30451-30456, "Induction of Cholinergic Differentiation with Neurite Sprouting by de Novo Biosynthesis and Expression of GD3 and b-series Gangliosides in Neuro2A Cells."
- 10.) Nakagawa, et al. (1985) *Br. J. Cancer* 51:357-363, "Effects of sodium n-butyrate on alpha-fetoprotein and albumin secretion in the human hepatoma cell line PLC/PRF/5."
- 11.) Toribara, et al. (1989) *Cancer Res.* 49:3321-3327, "Heterogeneity in the Induction and Expression of Carcinoembryonic Antigen-related Antigens in Human Colon Cancer Cell Lines."

- 12.) Werkmeister, et al. (1983) *Int. Cancer* 32: 71-78, "Modulation of K562 Cells With Sodium Butyrate. Association of Impaired NK Susceptibility with Sialic Acid and Analysis of other Parameters."
- 13.) Passaniti, et al. (1988) *J. Biol. Chem.* 263:7591-7603, "Cell surface sialylation and tumor metastasis."
- 14.) Gornati, et al. (1995) *Cancer Biochem. Biophys.* 15:1-10, "Glycosyltransferase Activities in Human Meningiomas. Preliminary Results."
- 15.) Grimes, W.J. (1973) *Biochemistry* 12:990-996, "Glycosyltransferase and Sialic Acid Levels of Normal and Transformed Cells."
- 16.) Schirmacher, et al. (1982) *Invasion Metastasis* 2:313-360, "Importance of Cell Surface Carbohydrates in Cancer Cell Adhesion, Invasion and Metastasis."

Respectfully submitted,
McDonnell Boehnen Hulbert & Berghoff

Date: July 14, 2000

By:


Patrick J. Halloran
Reg. No. 41,053



INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

Applicant: M. S. K. S. S.

File Date: November 12, 1997 Group: 1011

OTHER DOCUMENTS - Including Author, Title, Date, Pertinent Pages, Etc.

1. Lotan et al. (1984) *Proc. Natl. Acad. Sci. USA* 81:558-562. "Correlation of Retinyl A-Dependent Sialyltransferase Activity with Glycosylation of Specific Cell Surface Sialoglycoproteins with Growth Inhibition in a Murine Melanoma Cell System."
2. Bresnahan et al. (1996) *Proc. Natl. Acad. Sci. USA* 93:1299-1303. "Cell Surface Sialoprotein Alterations in Metastatic Muring Colon Carcinoma Lines Selected in an Animal Model for Colon Cancer Metastasis."
3. Shahi et al. (1992) *Cancer Res.* 52:652-656. "Sodium Butyrate Reduces the Expression of β -Galactosidase α 2-6 Sialyltransferase in Her G2 cells."
4. Sata et al. (1991) *J. Pathol.* 159:1435-1448. "Expression of α 2,6-Linked Sialic Acid Residues in Neoplastic Epithelia in Normal Colonic Mucosa."
5. Maren et al. (1992) *Cancer Res.* 52:4936-4940. "The c-Ha-ras oncogene induces an increase in expression of β -galactosidase α 2-6 sialyltransferase in the fibroblast of R313 cells."
6. Kaneko et al. (1996) *Int. J. Neurog.* 1:254-262. "The expression of α 2,6-linked β 1,4-GlcNAc α 2,6 sialyltransferase and α 2-6 linked sialoglycocojugates in human brain tumors."
7. Collard et al. (1986) *Cancer Research* 46:3521-3527. "Cell Surface Sialic Acid and the Invasive and Metastatic Potential of T-Cell Hybridomas."
8. Livingstone et al. (1988) *J. Biol. Chem.* 263:9443-9448. "Extended Polysialic Acid Chains ($n < 55$) in Glycoproteins from Human Neuroblastoma Cells."
9. Kounina et al. (1994) *J. Biol. Chem.* 269:30451-30456. "Induction of Cholinergic Differentiation with Neurite Sprouting in Non-Biosynthesis and Expression of GD3 and b-series Gangliosides in Neuro2A Cells."
10. Nakagawa et al. (1985) *J. Clin. Invest.* 75:357-363. "Effects of sodium butyrate on a plasminogen and albumin secretion in the human hepatoma cell line PLC-PRI-5."
11. Toribara et al. (1989) *Cancer Res.* 49:332-337. "Heterogeneity in the Location and Expression of Tumor-Associated Antigen-Related Antigens in Human Colon Cancer Cell Lines."
12. Werkmeister et al. (1983) *Int. J. Cancer* 32:75-78. "Modulation of K562 Cells With Sodium Butyrate: Association of Increased NK Susceptibility with Sialic Acid and Analysis of Other Parameters."
13. Passaniti et al. (1988) *Biochemistry* 27:7579-7583. "Cell Surface Sialylation and Tumor Metastasis."
14. Chomati et al. (1995) *Proc. Natl. Acad. Sci. USA* 92:1015-1019. "Increased Sialylation of Glycoproteins in Human Meningeal Proliferative Lesions."
15. Saito et al. (1973) *Cancer Res.* 33:244-246. "Effect of Sialyltransferase and Sialic Acid Levels of Normal and Transformed Cells."
16. Schumacher et al. (1982) *Int. J. Cancer* 29:101-105. "Alterations of Cell Surface Carbohydrates in Cancer Cells: Adhesion, Invasion and Metastasis."

Examiner

Date Considered

EXAMINER: Initial notation considered whether or not citation is in conformance with MPEP § 79. Draw line through citation if not in conformance and not considered. Include copy of this form with any communication.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
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For: Methods for Detection and Treatment
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Group Art Unit:

TRANSMITTAL LETTER

Asst. Commissioner for Patents
Washington, D.C. 20231

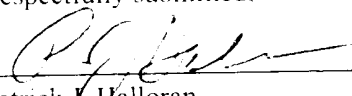
Dear Sir:

In regard to the above identified application.

1. We are transmitting herewith the attached:
 - a) Information Disclosure Statement;
 - b) PTO Form 1449;
 - c) Return postcard
2. With respect to fees:
 - a) No fee is required at this time.
 - b) Please charge any underpayment or credit any overpayment our Deposit Account. No. 13-2490.
3. CERTIFICATE OF MAILING UNDER 37 CFR § 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described in paragraph 1, are being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to the Asst. Commissioner for Patents, Washington, D.C. 20231 on July 14, 2000.

Date: July 18, 2000

Respectfully submitted,


Patrick J. Halloran
Registration No. 41,053